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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/927,498      | 08/13/2001  | Takashi Ishikawa     | 01USFP619           | 5318             |

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT PAPER NUMBER

2827

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|   |                      |                 |  |
|---|----------------------|-----------------|--|
| <b>REMAIL</b><br><b>Office Action Summary</b> | Application No.      | Applicant(s)    |  |
|   | 09/927,498           | ISHIKAWA ET AL. |  |
|   | Examiner             | Art Unit        |  |
|   | Ishwar (I. B.) Patel | 2827            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 6-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the figures are improperly crosshatched. All of the parts shown in section, and only those parts, must be crosshatched. The cross hatching patterns should be selected from those shown on page 600-114/115 of the MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Laid open Utility Model Application (JU-A-Heisei 1-161597), hereafter, JP597, admitted by the applicant.

Regarding claim 1, applicant's admitted prior art JP597 discloses all the features of the claimed invention as described on page 1 and 2 of the specification, including a transparent substrate, a light emitting section, a sealing cap, a flexible printed circuit board and a semiconductor device, see figure 2.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 rejected under 35 U.S.C. 103(a) as being unpatentable over JP597 as applied to claim 1 above.

Regarding claim 2 and 3, the applicant is claiming the said flexible circuit with wiring pattern on both the sides of the circuit board with semiconductor device mounted on the side of the sealing cap.

Though, JP579 does not disclose such flexible circuit board, the flexible circuit boards with the wiring pattern on both the sides are well known in the art and the semiconductor device can be mounted on any side of the circuit board depending upon the system requirement.

A person of ordinary skill in the art will use the known circuit board depending upon the system requirement in order to have the desired flexibility of locating the semiconductor devices in the system.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the structure of JP597 with the flexible circuit board as claimed in claims 2 and 3, in order to have the desired flexibility of locating the semiconductor device in the system.

***Claim Rejections - 35 USC § 103***

6. Claims 1-5 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terao et al., US Patent No. 6,342,932, hereafter, Terao, in view of Ebisawa et al., US Patent No. 6,284,342, hereafter, Ebisawa, and Park, US Patent No. 6,561,666

Regarding claim 1, Terao discloses a flat panel display module comprising:

a flexible printed circuit board connected to said wiring line terminal section and extending along said sealing cap of said transparent substrate (flexible circuit 12); and

a semiconductor device mounted on said flexible printed circuit board for said light emitting section (control LSI mounted on flexible circuit but not shown, column 4, line 65-67), but

fails to explicitly disclose a transparent substrate, a light emitting section in a display region of said transparent substrate and a sealing cap.

Though, Terao discloses all the features as a unit, (liquid crystal display unit 11). Further, the detail as the transparent substrate, light emitting section and the sealing cap, are known in the art for the desired functionality of the display device.

Ebisawa discloses a structure with transparent substrate 1, electroluminescent section 4 and sealing plate 3, see Ebisawa, figure 1, column 3, line 60 to column 4 line 15, and

Park discloses electroluminescent light emitting layer with a flexible circuit board 30, see Park, figure 2, column 2, line 50-67.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the structure of Terao with the detail of substrate, light emitting section and the sealing cap, as taught by Ebisawa and Park, in order to have the desired functionality of the display device.

Regarding claim 2, the applicant is claiming said semiconductor device is mounted on a side of said flexible printed circuit board of said sealing cap. Though, Terao does not explicitly disclose the semiconductor device mounted on the sealing cap side, it can be provided on any of the side of the flexible substrate depending upon the requirement.

Park discloses the circuit component such as integrated 33 on both the side of the flexible circuit board.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the structure of Terao with semiconductor device mounted on a side of said flexible printed circuit board of said sealing cap, depending upon the system requirement to have the desired functionality.

Regarding claim 3, the combination of Terao, Ebisawa and Park discloses the wiring pattern on both the sides, see Park, metal layer 31, figure 2.

Regarding claim 4, the combination of Terao, Ebisawa and Park further discloses the said flexible printed circuit board provided to extend along said transparent substrate and said sealing cap without being turned back, see Park, circuit board 30, figure 2.

Regarding claims 16 and 17, the combination of Terao, Ebisawa and Park further discloses a frame along said transparent substrate, including supporting the flexible printed circuit board, (holding member 10, see Terao, figure 3).

Regarding claims 18 and 19, the combination of Terao, Ebisawa and Park discloses wiring line terminal section formed on both sides of said surface of said opposite end of said transparent substrate, and said flexible printed circuit board is connected with said both of said wiring line terminal section, see Park, figure 2.

Regarding claims 20 and 21, the combination of Terao, Ebisawa and Park discloses all the features of the claimed invention including the light emitting section is an organic EL film and a desiccant section, see Ebisawa, figure 1, organic EL structure 4 and desiccant 6, column 4, line 1-15.

***Allowable Subject Matter***

7. Claims 5-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The flexible circuit board in flat panel display device parallel to the transparent substrate without bend is disclosed by Park, and flexible circuit board parallel to transparent substrate but turned back is disclosed by Terao. However, the flexible circuit board not turned back and bent at least twice between said wiring line terminal section and said display region such that said flexible printed circuit board is approximately parallel to said transparent substrate in display region as described and enabled by the disclosure and as shown in figures 3 and 4, has not been taught or suggested by prior art alone or in combination.



***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamashita et al., discloses a thin film electroluminescent panel including a transparent substrate and with moisture absorbent powder.

Young discloses organic electroluminescent device.

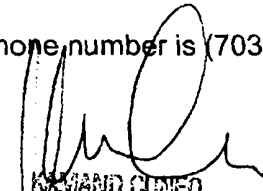
Yasukawa et al., discloses an organic electroluminescent device.

Hashimoto discloses a flat panel display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (8:30 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

  
EDWARD CUNEO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

ibp  
August 10, 2003